

IN THE CLAIMS:

Claim 17 has been amended.

Claims 1 - 16 (cancelled)

17. (currently amended) A method for fabricating [[a]] probe pins, comprising:

forming silicon pins rising in the vertical direction by crystal growth, each silicon pin having a tip, a side, and a bottom;

coating the tip and the side of each silicon pin with a first metal forming an insulating layer filling up the space between the silicon pins to fix the silicon pins so that the tips of the silicon pins project from a top face of the insulating layer and that a bottom face of the insulating layer aligns with bottoms of the silicon pins;

covering the bottom face of the insulating layer and the bottoms of the silicon pins with a second metal;

heating the silicon pins, the insulating layer, and the first and second metals all together at a temperature above an alloy-forming temperature of silicon and the second metal and below an alloy-forming temperature of silicon and the first metal;

removing a non-reacted second metal that has not been reacted with the silicon pins during the heating step; and

forming a third metal on the bottoms of the silicon pins, from which the non-reacted second metal has been removed.

18. (original) The method according to claim 17, wherein the silicon pins are formed on a silicon substrate, and the silicon substrate is removed after the insulating layer is formed.

19. (previously presented) The method according to claim 17, further including

connecting the bottoms of the silicon pins covered with the third metal to electrodes placed in a print board by one-to-one correspondence.

20. (previously presented) A method for fabricating a probe pin, comprising:
forming silicon pins rising in the vertical direction by crystal growth, each silicon pin having a tip, a side, and a bottom;
coating the tip and the side of each silicon pin with a first metal;
forming an insulating layer filling a space between the silicon pins to fix the silicon pins in such a manner that the tips of the silicon pins project from a top face of the insulating layer;
forming a recess at the bottom of each silicon pin; and
covering the recesses and a bottom face of the insulating layer with a third metal.

21. (previously presented) The method according to claim 20, further including removing the third metal from the bottom face of the insulating layer, while leaving the third metal inside the recesses.

22. (original) The method according to claim 20, wherein the silicon pins are formed on a silicon substrate, and the silicon substrate is removed after the insulating layer is formed.

23. (previously presented) The method according to claim 20, further including connecting the bottoms of the silicon pins covered with the third metal onto electrodes placed in a print board by one-to-one correspondence.

24. (previously presented) The method according to claim 17, wherein the first metal is gold.

25. (previously presented) The method according to claim 17, wherein the

second metal is nickel.

26. (previously presented) The method according to claim 17, wherein the second metal is platinum.

27. (previously presented) The method according to claim 17, wherein the second metal is lead.

28. (previously presented) The method according to claim 17, wherein forming the third metal on the bottoms of the silicon pins includes coating the bottoms with the third metal utilizing electrolytic plating.

29. (previously presented) A method for fabricating a probe pin, comprising:
forming a silicon pin rising in the vertical direction by crystal growth, the silicon pin having a tip, a side, and a bottom;

coating the tip and the side of the silicon pin with a first metal forming an insulating layer to fix the silicon pin so that the tip of the silicon pin projects from a top face of the insulating layer and that a bottom face of the insulating layer aligns with the bottom of the silicon pin;

covering the bottom face of the insulating layer and the bottom of the silicon pin with a second metal;

heating the silicon pin, the insulating layer, and the first and second metals all together at a temperature above an alloy-forming temperature of silicon and the second metal and below an alloy-forming temperature of silicon and the first metal;

removing a non-reacted second metal that has not been reacted with the silicon pins during the heating of the silicon pin; and

forming a third metal on the bottom of the silicon pin, from which the non-reacted

second metal has been removed.

30. (previously presented) The method according to claim 29, wherein the silicon pin is formed on a silicon substrate, and the silicon substrate is removed after the insulating layer is formed.

31. (previously presented) The method according to claim 29, wherein the first metal is gold.

32. (previously presented) The method according to claim 29, wherein the second metal is nickel.

33. (previously presented) The method according to claim 29, wherein the second metal is platinum.

34. (previously presented) The method according to claim 29, wherein the second metal is lead.

35. (previously presented) The method according to claim 29, wherein forming the third metal on the bottom of the silicon pin includes coating the bottom with the third metal utilizing electrolytic plating.